



Theme 3: Science for Management and Policy

Exploring and evaluating the role of knowledge in the governance of complex socio-ecological systems

Diana Giebels, Arwin van Buuren & Jurian Edelenbos
Erasmus University Rotterdam
Research unit 'Governance of complex systems'

Why are socio-ecological systems complex? What does this complexity imply for the role of knowledge?



Ecological complexity

evolutionary systems

characterized by non-linear dynamics

tidal equilibria

non-predictability

Social complexity

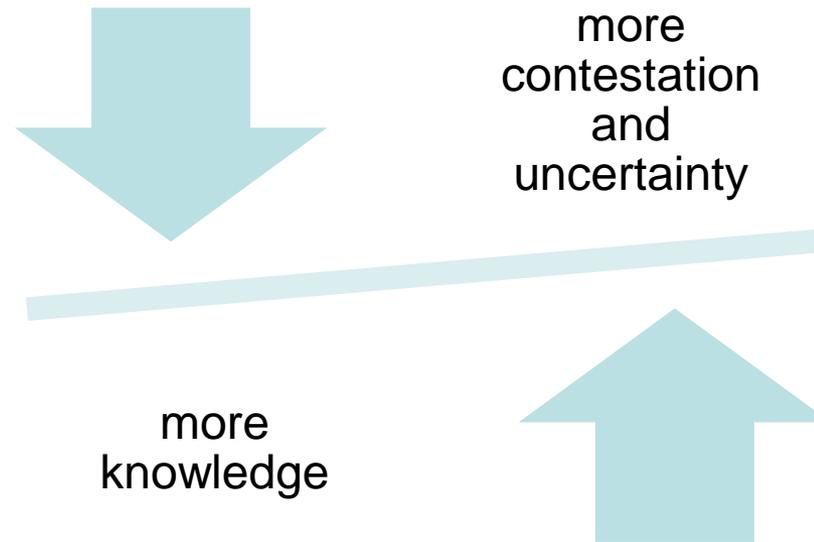
knowledge complexity

quantity of institutions,
quantity of knowledge
sources, e.g. scientific,
expert, local, lay

actor complexity

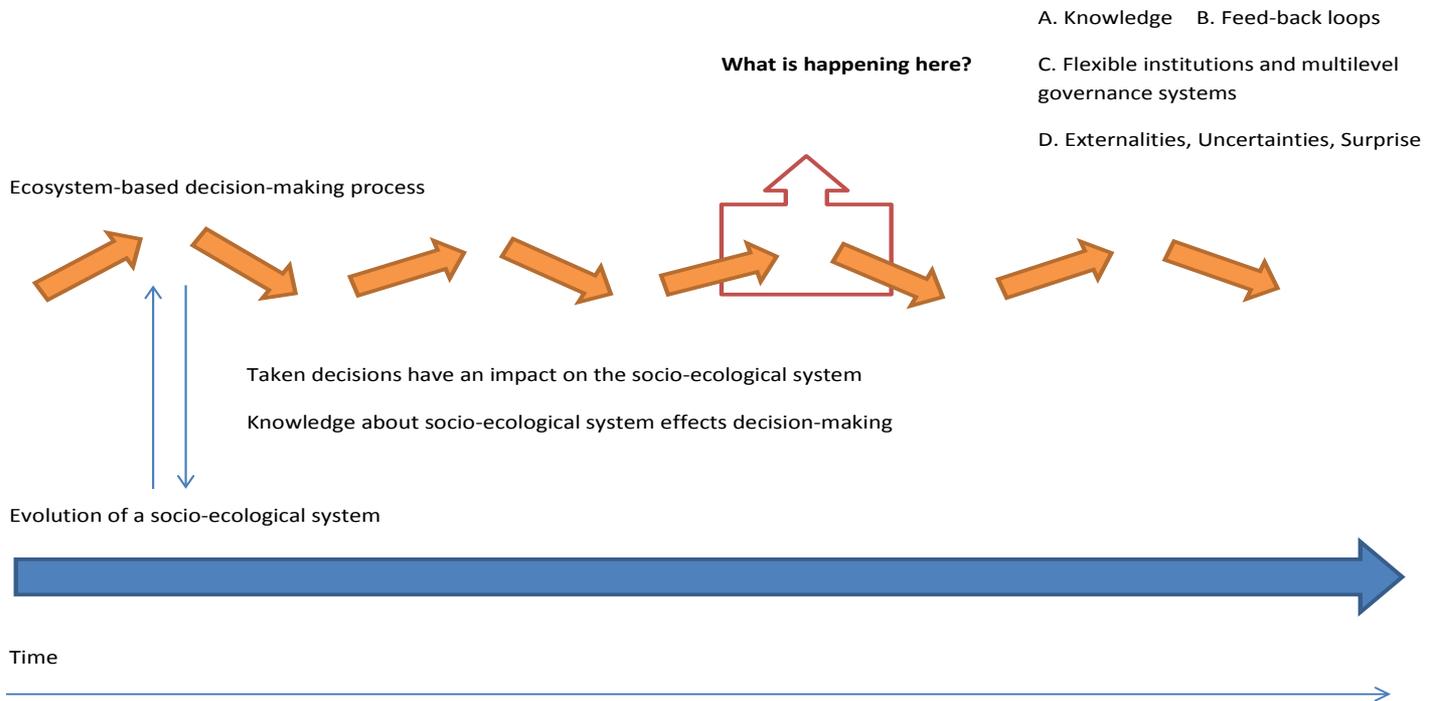
issue contestation,
resource competition,
institutional backgrounds,
relational bondings,
professional
specialisation

Hypothesis: Environmental Knowledge Paradox



Links between knowledge and decision-making

Towards ecosystem-based management in the Wadden Sea?
Exploring and evaluating adaptive management in a comparative perspective



Empirical case study: The Houting Project



Preliminary results

- identification of **high variety of knowledge sources**: scientific, expert, citizen
- **high variety of knowledge mobilization**: contracts, public hearings, individual negotiation
- **diverse strategies to cope with environmental knowledge paradox** adaptive feed-back loops: weekly 'construction meetings'; adaptive measures: 'rules of thumb'
- crucial role of **adaptive management regime**: listening skills, understanding, mutual adjustment: high quality of interaction



Thank you for your attention!

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